

REMARKS

In response to the Office Action mailed September 8, 2010, Applicant respectfully requests reconsideration. Claims 65-78 were previously pending in this application. No claims have been amended, none have been canceled, and no new claims have been added. To further the prosecution of this application, each of the rejections set forth in the Office Action has been carefully considered and is addressed below. The application as presented is believed to be in condition for allowance.

Rejections Under 35 U.S.C. §103

The Office Action rejects claims 65-78 under 35 U.S.C. §103(a) as purportedly being obvious over Stuart (US 2005/0055519) in view of McGovern (US. 2005/0097260). For the reasons discussed below, these rejections are respectfully traversed.

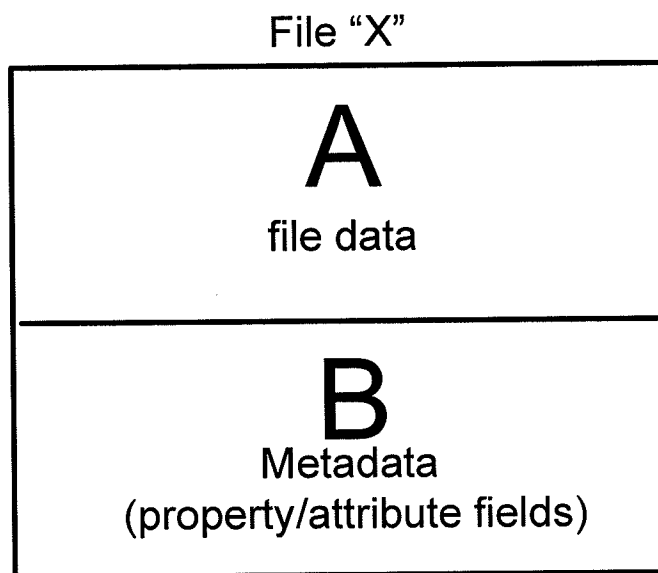
Independent Claim 65

Claim 65 is directed to a method comprising, *inter alia*, an act of, “receiving a request, from the host, to delete a unit of content stored on the storage system, wherein a previously-defined retention period for the unit of content is stored in the unit of content, wherein the request identifies the unit of content using a content address generated, at least in part, from at least a portion of the content of the unit of content, and **wherein the at least the portion of the content of the unit of content includes the previously-defined retention period** and at least some other content in the unit of content (emphasis added).”

Claim 65 patentably distinguishes over the asserted combination of Stuart and McGovern because this combination fails to disclose or suggest that, “the at least the portion of the content of the unit of content [from which the content address is generated] includes the previously-defined retention period.” That is, claim 65 requires that the content address for the unit of content is generated from the portion of the content of the unit of content that includes the retention period. As explained in detail below, in the hypothetical system resulting from the asserted combination of Stuart and McGovern, the content address for a file is created by hashing

content of the file, but the content that is hashed to generate the content address does not include the retention period. Specifically, in this hypothetical system, the retention period is stored in the file's "last access time" property/attribute field, but the property/attribute fields for a file are not input to the hashing function with the rest of the file content to generate the content address for the file. To illustrate this point more clearly, a simple example is provided below.

The diagram below illustrates the data and metadata associated with a file "X." Portion A in the box shown below is the file data, and portion B is the metadata associated with the file, including the properties and attributes. Thus, the retention period for file "X" is stored in the metadata in portion B of the box. In the system resulting from the asserted combination of Stuart and McGovern, only portion A is hashed to generate the content address. The metadata in portion B is not input to the hashing algorithm when the content address for File "X" is being generated. As such, the portion of the content of File "X" from which the content address is generated does not include the previously-defined retention period.



On page 3 of the Office Action, the Examiner appears to make the factual finding in support of the obviousness rejection that McGovern, in ¶0017, provides the metadata in the

property/attribute fields (including the “last access time” property/attribute) for a file as input to the hashing algorithm that is used to generate the content address for the file. Applicant adamantly disagrees with this factual finding. Notably, the Office Action does not provide any reasoning in support of this factual finding, but rather provides only the bare conclusory statement that “McGovern teaches..., ‘and wherein the at least a portion of the content of the unit of content includes the previously-defined retention period...,’ at [0017] and [0020].

While Applicant acknowledges that, at ¶0017, McGovern discloses that, in WORM storage systems, a content address can be computed for a record by inputting content from the record into an algorithm, such as an MD5 hash, that creates a digital signature for the record, this portion of McGovern **does not** disclose that the file properties/attributes are included in the content that is input into the hashing algorithm. Moreover, a **careful** reading of McGovern illustrates that in the WORM storage system described by McGovern, metadata such as the property/attribute that stores the retention period would not be input into the hashing algorithm used to generate the content address.

Specifically, WORM stands for “Write Once, Read Many,” which means that once a record is written, it cannot be changed or modified, but can only be read. As explained at ¶0010 of McGovern, Securities and Exchange Commission rules require that certain documents be stored and remain unchanged and unchangeable for a number of years. Using a content address for a record in WORM systems allows for verification that a previously-stored record has not been changed since it was stored. In particular, the content address for the record may be computed when the record is initially stored. When the record is subsequently accessed, the content address may be recomputed and the recomputed content address may be compared to the originally-computed content address. If the originally computed content address matches the recomputed content address, it is known that the content of the record has not changed. If the recomputed content address does not match the originally-computed content address, then it is known that the record has become corrupted or been altered. Indeed, as stated at ¶0018 of McGovern, “[m]odification of existing objects is impossible because any changes in the contents

of an object will result in a new content address, and hence a new object being created in the storage system.”

As explained below, McGovern discloses that the properties/attributes of a file are able to be modified after the file has been stored. Thus, these properties/attributes cannot be input into the hash function that is used to generate the content address for a file because, if these properties were used in generating the content address, then modifying the properties/attributes would result in a new content address and a new file being created.

Specifically, in ¶0127 and Figure 12, McGovern discloses that the file attribute that stores the retention period can be modified after the initial setting of the retention period. If, as the Examiner contends, the file attribute that is used to store the retention period were to be used in generating the content address for the file, modifying this attribute in the manner described in ¶0127 would alter the content address for the file and would defeat the purpose of using a content address. As such, it is clear in McGovern that the content address for a file is not generated from the attribute that stores the retention period value. Stuart does not cure this infirmity of McGovern.

As such, the asserted combination of Stuart and McGovern does not disclose or suggest, that, “the at least the portion of the content of the unit of content [from which the content address is generated] includes the previously-defined retention period.” As such, claim 65 patentably distinguishes over the asserted combination of Stuart and McGovern, and it is respectfully requested that the rejection of claim 65 under 35 U.S.C. §103(a) be withdrawn.

Independent Claims 70 and 75

Independent claim 70 is directed to at least one computer readable storage medium encoded with instructions that, when executed on a computer system, perform a method comprising, *inter alia*, “receiving a request, from the host, to delete a unit of content stored on the storage system, wherein a previously-defined retention period for the unit of content is stored in the unit of content, wherein the request identifies the unit of content using a content address generated, at least in part, from at least a portion of the content of the unit of content, and

wherein the at least the portion of the content of the unit of content includes the previously-defined retention period and at least some other content in the unit of content.”

Independent claim 75 is directed to a storage system comprising at least one controller that, *inter alia*, “receives a request, from the host, to delete a unit of data stored on the storage system, wherein a previously-defined retention period for the unit of content is stored in the unit of content, wherein the request identifies the unit of content using a content address generated, at least in part, from at least a portion of the content of the unit of content, and wherein the at least the portion of the content of the unit of content includes the previously-defined retention period.”

As should be appreciated from the discussion above, each of claims 70 and 75 patentably distinguishes over the asserted combination of Stuart and McGovern, as neither Stuart nor McGovern discloses or suggests that the at least the portion of the content of the unit of content includes the previously-defined retention period.

Accordingly, it is respectfully requested that the rejection of each claims 70 and 75, under 35 U.S.C. §103(a), be withdrawn.

General Comments On Dependent Claims

Each of the dependent claims depends directly or indirectly from one of the independent claims. For reasons described in detail above, each of the independent claims patentably distinguishes over the references and each of these dependent claims distinguishes over the references at least based on its dependency. Accordingly, for at least the foregoing reasons, it is respectfully requested that the rejections of each of the dependent claims be withdrawn.

Because each of the dependent claims depends from a base claim that is believed to be in condition for allowance, Applicant believes that it is unnecessary at this time to argue the allowability of each of the dependent claims individually. However, Applicant does not necessarily concur with the interpretation of the dependent claims as set forth in the Office Action, nor does Applicant concur that the basis for the rejection of any of the dependent claims is proper.

CONCLUSION

In view of the above remarks, Applicant believes the pending application is in condition for allowance. A Notice of Allowance is respectfully requested. The Examiner is requested to call the undersigned at the telephone number listed below if this communication does not place the case in condition for allowance.

If this response is not considered timely filed and if a request for an extension of time is otherwise absent, Applicant hereby requests any necessary extension of time. If there is a fee occasioned by this response, including an extension fee, the Director is hereby authorized to charge any deficiency or credit any overpayment in the fees filed, asserted to be filed, or which should have been filed herewith to our Deposit Account No. 23/2825, under Docket No. E0295.70190US00 from which the undersigned is authorized to draw.

Dated: November 23, 2010

Respectfully submitted,

By 

Scott J. Gerwin

Registration No.: 57,866

WOLF, GREENFIELD & SACKS, P.C.

600 Atlantic Avenue

Boston, Massachusetts 02210-2206

617.646.8000